DOCUMENT RESUME

ED 257 268 EC 172 595

AUTHOR Smith, Corinne Roth
TITLE A Process Approach to Assessing Children with Learning Difficulties: Merging Assessment and Intervention.
PUB DATE Apr 85
NOTE 26p.; Paper presented at the Annual Convention of the Council for Exceptional Children (63rd, Anaheim, CA, April 15-19, 1985).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Elementary Secondary Education; Evaluation Methods; *Informal Assessment; *Learning Disabilities; Models; *Student Evaluation

ABSTRACT

A multidimensional approach to assessment of children with learning difficulties is examined. The approach explores factors along five dimensions: (1) learner characteristics (motivation, social-emotional maturity, cognitive abilities and styles); (2) task-based contributors (match of tasks to maturational levels and to cognitive style); (3) family-based contributors (quality of nutrition and stimulation, sociocultural differences, emotional climate); (4) physiological learner-based contributors (organic, hereditary, and biochemical factors); and (5) school-based contributors (quality of teaching, human characteristics). Described are a variety of assessment alternatives, including nonstandard use of norm-referenced and criterion-referenced instruments (e.g., task analysis and item modification), task analysis and trial teaching within the student's classroom curriculum, assessment of adaptive behavior, systematic observation in natural settings, sociometric techniques, self-constructed peer/parent/teacher rating scales to address specific issues, and active involvement of the student, parents, and teachers in hypothesis testing. Such informal evaluation strategies are seen to allow for examination of matches and mismatches between task, setting, and learner which contribute to learning success and failure. (CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED257268

A PROCESS APPROACH TO ASSESSING CHILDREN WITH LEARNING DIFFICULTIES: MERGING ASSESSMENT AND INTERVENTION

Corinne Roth Smith
Syracuse University

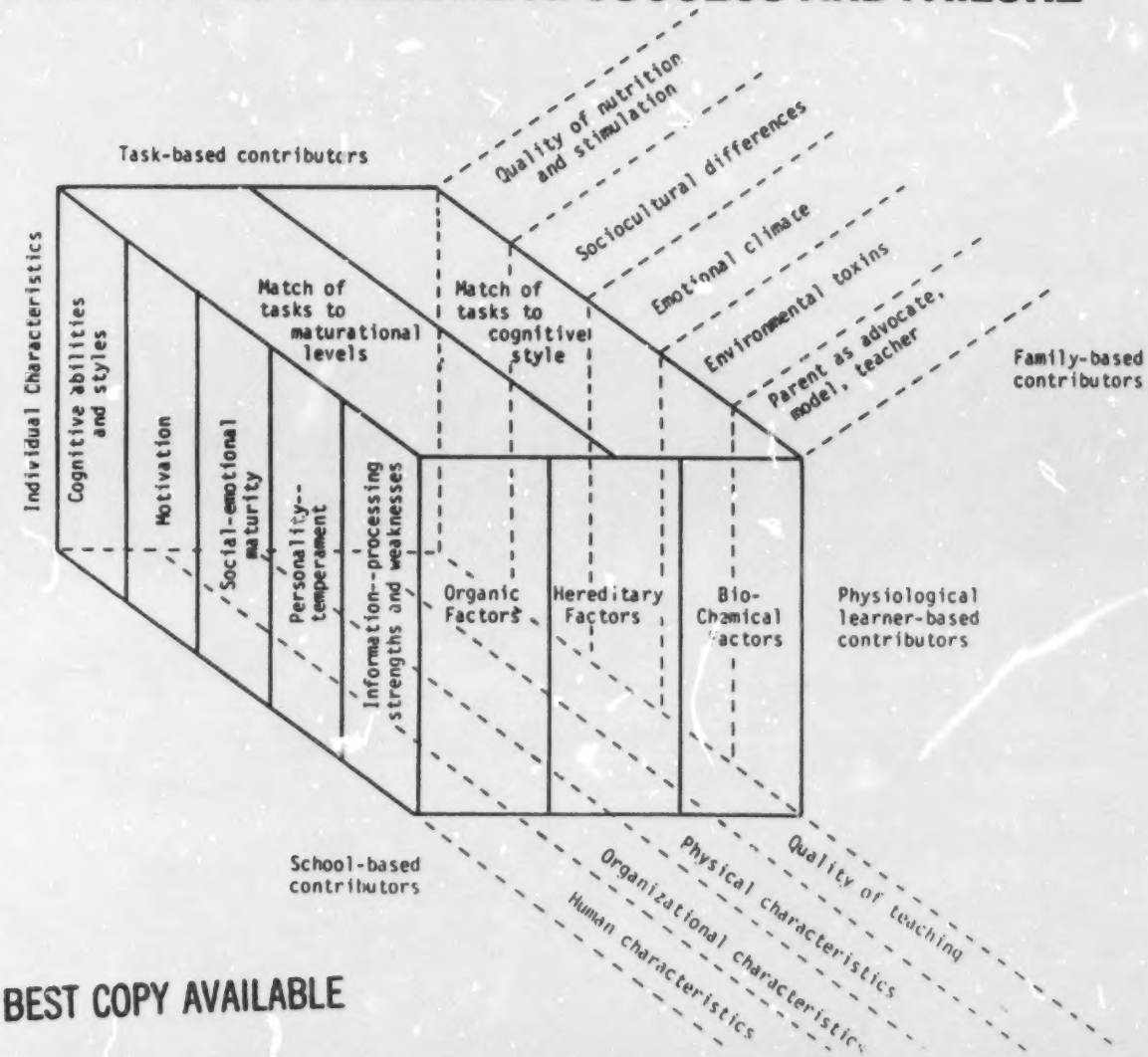
Assessment is critical to planning meaningful interventions for children who are experiencing learning difficulties. However, our traditional assessment approaches preclude precise specification of what children are ready to learn and how they might learn best. This occurs because they do not comprehensively address the learner, task, and setting factors that interact to make each student's needs unique. As learning can be greatly ameliorated or aggravated by task and setting variables, in assessing the nature of a child's strengths and weaknesses and determining how best to teach the child, the roles of task and setting factors are important considerations. It is our academic task requirements, social demands, and attitudes that heavily determine the extent to which children's learning can be facilitated. Consequently, in trying to meet these children's educational, personal, and social needs, our looking glasses must be turned inward to ourselves and outward to society, as well as toward the child. Consideration of task and setting factors is critical because, in reality, it is our task and setting attributes that must ultimately accommodate to each learner's unique educational and personal needs. If we can successfully match the nature of learning tasks, teaching strategies, and interpersonal interactions to these individuals' strengths and weaknesses, what they are ready to learn, and how they learn best, we can do much to enhance their learning and life adjustment. In effect, each student's learning and adjustment will change only as we change what we require of the student, how we require it, where we require it, and when it is required.

Figure 1 depicts the scope of learner, task and setting factors that need to be evaluated in order to meaningfully plan interventions. The learner-based face of the cube entitled individual characteristics explores several student attributes that require attention, due to their relationship to learning success and failure: cognitive abilities (intelligence, achievement levels in various academic areas) and cognitive styles (impulsive - reflective, low or high conceptual level, internal vs. external control, metacognitive learner strategies, analytic vs. gestalt conceptual style), motivation, social-emotional maturity, personality/temperament, and information-processing strengths and weaknesses that logically lie along academic hierarchies, thereby sharing many attributes in common with academic criteria and impacting on achievement (visual perception, language, attention, and motor skills). Examples of task relevant information - processing abilities to consider include revisualization of phonetically irregular spellings, facility with use of verbal labelling and rehearsal as a

EC 225-95

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Corinne R. Smith
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

LEARNER, TASK, AND SETTING CONTRIBUTORS TO LEARNING SUCCESS AND FAILURE



BEST COPY AVAILABLE

memory aid, visual and auditory information processing time, relationship of linguistic abilities to comprehension, word finding, analysis/segmentation of sounds/syllables in reading and spelling words, copying or writing from dictation, ability to focus and sustain attention and organize various types of classroom information for storage.

The face of the cube labelled task - based contributors acknowledges that the tasks we ask children to do may contribute to learning problems by making demands on their maturity levels or learning styles that they ar not prepared to meet. Consequently, we must evaluate how the curriculum content and teaching approaches can best match what a student already knows, what the student is ready to master, and how the student prefers to go about learning (e.g. maximizing attention sustaining task variables by reducing stimulus complexity and response competition, matching task repetitions to practice needs, building generalization into tasks, matching incentives to student extrinsic vs. intrinsic motivation, teaching efficient learning strategies).

Our two setting - based faces enumerate family and school factors that greatly influence children's learning and behavior. Family - based contributors that may either foster or reduce a child's ability to learn to full potential require attention: quality of nutrition and stimulation, emotional climate, environmental toxins, sociocultural differences, and the effectiveness of the parent as advocate, model, and teacher. School - based contributors to achievement and social - emotional adjustment include quality of teaching, physical characteristics (e.g. meaningful noise, school size, seating arrangements), organizational characteristics (e.g. labelling, special and regular class placements, open - education), and human characteristics (e.g. teacher attitude toward special children, teacher - student interaction, peer characteristics).

The final face of the cube, physiological learner - based contributors, though linked with few accepted intervention approaches, is one that is foremost in many parents' minds. Organic factors (e.g. evaluating neuropsychological patterns), reviewing hereditary patterns of learning disorders, and biochemical studies at times help in the understanding of factors that may to some degree bear a relationship to children's abilities in different areas of development.

Appreciation of the multiple dimensions that play a part in children's growth and development helps us to more accurately assess, observe, program for, and explain the contributors to particular children's progress. The more traditional, standardized approaches to assessment contradict our sensitivity to the fact that children live and learn within an ecological system that impacts on their successes and failures. Standardized tools hold the environment

BEST COPY AVAILABLE

constant in order to specify how children compare to their normative, typical peers. While this information is certainly useful in promoting an understanding of the child, it does not suggest how the tasks that we expect these children to accomplish and the settings in which they are expected to learn can best be altered to facilitate personal growth. The interindividual knowledge gleaned from these measures requires expansion into intraindividual comparisons so as to determine the modifications in tasks and settings that will best promote student progress.

As we begin to experiment with intervention ideas during our assessment process, the interindividual comparison limitations of current procedures are overcome. Additional criticisms frequently levelled at standardized procedures also are overcome: the fact that test sampling of theoretical processes that have questionable validity in the child's situation often leads to labels, segregation, an invalid recommendations; knowledge that intra- and interindividual differences may be more apparent than rea ; it is child - deficit statements that are generated, rather than indications of exactly what and how a child is ready to learn.

In contrast to terminating assessment at the point at which we have discovered how much a child has learned relative to his/her peers, we must continue to find out precisely what a child will learn when the how, what, where, when, and who's of the tasks and settings are modified in specific ways. The goal is to discover under what conditions a child "can." We do this by hypothesizing about where the interference in performance is coming from, how the child learns best, and then modifying the task or setting accordingly. Clearly, instead of considering only the products of learning by evaluating the characteristics of children and ignoring those of the environment, we need to focus on what a person is ready to learn and how a person learns best by varying environmental characteristics.

Over the years, Syracuse University's Psychoeducational Teaching Laboratory staff has developed extensive informal, nonstandardized evaluation strategies in a dual effort to conduct as nonbiased assessments as possible while tying evaluation techniques more directly to intervention. Recognizing that standardized measures seldom indicate exactly "what" or "how" a child should be taught, while criterion - referenced measures more precisely define only the "what to teach" dimension, the laboratory has promoted the use of several assessment alternatives: nonstandard use of norm - referenced and criterion-referenced instruments (e.g. task analysis and modification of items until the child is successful, testing limits, teaching for generalization, enhancing motivation), task analysis and trial teaching within the student's classroom curriculum, assessment of adaptive behavior, systematic observation in natural

BEST COPY AVAILABLE

settings, sociometric techniques, self - constructed peer/parent/teacher rating scales to address specific issues, and active involvement of the student, parents, and teachers in hypothesis testing. These informal evaluation strategies specify what and how to teach in a less biased and more precise manner than do more standard assessment practices. This is because these procedures permit the testing of hypotheses regarding the way in which the content and style of task and setting performance expectations interact with unique child abilities and learning styles to affect developmental, academic, and social - emotional progress. The outcome of, these alternative methods is elaboration of how tasks and settings can be modified so as to best utilize the child's strengths.

In order to conduct a dynamic assessment of learner, task, and setting factors that relate to a child's performance, data must be gathered which describes each of these elements. This first step requires administration of norm - and criterion - referenced instruments, observation in home and school settings, interviews with parents/ teachers/ student/ significant others, and examination of prior records. Then the fun begins. With a thorough understanding of this initial data, hypotheses about the interaction between child, task, and setting are tested within the evaluation setting, home, or classroom. The results of these mini - experiments dictate the interventions that will be recommended. Moreover, these interventions will carry greater validity than is customary as they've already been "tried and proven." Evaluators have more confidence in their recommendations, and teachers and parents are more enthusiastic about trying these techniques because they've already met with success.

Our diagnostic teaching methods evaluate the hypotheses generated during careful observation of the assessment process. These hypotheses first should question task attributes that may not facilitate a child's demonstrating that he actually "knows." The child might reattempt the identical task, but with several task modifications suggested by observation of learner strategy: directed instructions, increased time, guided attention, self instructions, motivational techniques. If the child is then successful, we've identified a performance difficulty when specific task attributes are incongruent with the child's way of knowing. These task modifications become an important part of the recommended classroom techniques.

What happens if the child is still unsuccessful after we have attempted to alter task attributes so as to be congruent with our assumptions about his learning strategy? We must then assume that the task is too difficult in its present state and task analyze it along several dimensions of difficulty. This might include altering materials and/or

BEST COPY AVAILABLE

responses from expressive to easier receptive communication demands, group to 1:1 situations, abstract to concrete, verbal to nonverbal, symbolic to nonsymbolic, sequential to static items, long - term recall to short - term recall to no memory requirements.

Modifying the task along the above dimensions will help us discover what portion of the task the child has actually mastered and how he may learn best. Thus, we've defined the hierarchy of task difficulty to follow when teaching the child, as well as the strengths to be utilized in remedial instruction.

No standard battery of tools and approaches can be developed for a process approach to assessment, as each evaluation is individually tailored to the unique questions being raised by our understanding of the learner's characteristics and ecological system. Each child presents a new challenge to the sensitivity and creativity of the examiner. Let us now explore some concrete illustrations of how we have operationalized our process approach to assessment.

Nonstandard Use of Norm - Referenced Tests

When using norm - referenced instruments, we must always analyze the task components for what they appear to be for that child in that setting, rather than trusting that we have actually measured what the test purports to measure. These instruments are merely a place to begin the focus of evaluation, and should never be permitted to be the end of the process. While test manuals will admonish against altering test instructions or environments, these alterations are necessary if we sincerely believe that understanding of the interaction between specific, unique child - task - setting characteristics is informative. It is the discrepancy between initial performance and performance after alterations that tells us what competencies a child actually does have if the task is matched to his/her abilities and styles.

Task Analysis.

Five year old Jimmy was referred for evaluation because "he wasn't learning anything in math in his kindergarten class." Indeed, despite average intelligence, Jimmy performed very poorly on the WPPSI and K-ABC Arithmetic subtests. In addition, writing was a difficult chore for him and he avoided all worksheets by merely scribbling on them. Noting Jimmy's extremely short attention span, the examiner hypothesized that Jimmy may in fact be capable of performing

BEST COPY AVAILABLE

the required math operations were it not for the aural means in which many of the problems were presented. When the identical problems were presented with blocks, Jimmy easily solved them all. In addition, the examiner decided to alter worksheet tasks to accmodate Jimmy's poor ability to form numerals. Jimmy was encouraged to solve the worksheet problems by drawing sticks for each numeral and reporting his answer in the form of sticks. Jimmy enjoyed this a great deal. Jimmy's success with these methods indicated that the problem in the classroom actually was due to the teacher instructing at a level of abstraction that was mismatched with Jimmy's ability to focus and sustain attention. He still required concrete objects to engage attention, but could demonstrate good mathematical reasoning under these circumstances. A more concrete approach to both math instruction and demonstration of knowledge was implemented in the classroom and Jimmy received special help learning such components of handwriting as diagonals and curves. Manipulatives were used to increase his alertness to "twoness" and "threeness" so that these concepts could eventually be more abstractly manipulated.

BEST COPY AVAILABLE

Another example of applying task analysis to standardized measures is illustrated by twelve year old Sabrina's extremely poor performance on the Word Order subtest of the Test of Language Development - Intermediate. On this task she was required to listen to dictated words and then reorder them into a sentence. We had hypothesized that the auditory memory requirement of the task may be interfering with performance. Therefore, we wrote each word on an index card, presented the words in the same order as on the subtest, and asked Sabrina to reorder them to make a sentence. Although she was a good decoder, Sabrina had extreme difficulty with this task. She was able to correctly reorder only sentences of four or fewer words. This observation corresponded with her difficulty comprehending long statements, her trouble understanding textbooks beyond a second grade level, and her tendency to speak in single word utterances. Sabrina's difficulty appeared to be at the syntactic level of language proficiency, as semantic information presented in four or fewer words was well understood. Recommendations for Sabrina included daily syntactic language programming rather than what we originally had hypothesized, strategies to enhance memory.

Testing Limits.

By testing limits on a standardized measure, we can determine whether what appears to be a disability is merely an inability to demonstrate these competencies at the time. For example, nine year old John was being seen at the clinic because he was still at a preprimer reading level. When administered the WISC-R, he earned subtest scaled scores in above average to superior ranges, with the exception of the Similarities subtest, a measure of abstract reasoning. John earned a low average score on this subtest because he gave very concrete responses. The standardization rules precluded the examiner from demonstrating a more abstract response more than twice. As she was required to accept his first scoreable response, the examiner could not determine whether John actually did possess these abstraction abilities. On his second visit to the clinic the examiner merely explained to John the level of answer that was expected (e.g. instead of saying that an apple and a banana are alike because you eat them, I want a one word answer that tells me the category to which they belong; fruit). John's new scaled score was within the superior ranges. Clearly, John had no difficulty with abstraction but demonstrated a preference for interacting with tasks on a concrete level rather than taxing his reasoning abilities. His parents, observing through the one-way mirror, reflected on whether this tendency was related to his being the last born, being excused from much responsibility, and being pitied for the reading deficit that he had inheritted from his father.

BEST COPY AVAILABLE

Trial Teaching.

When John could not identify final sounds that he heard in words, the Lindamood Test of Auditory Conceptualization (LAC) was administered in order to determine his ability to analyze and sequence individual sounds. This ability is critical to reading progress. John was very capable of ordering three and four blocks that represented individually dictated sounds (e.g. p p s). However, when sounds were blended into nonsense syllables (e.g. pips), John had a great deal of difficulty identifying how many sounds he heard and their positions in the words. The only prereading skill that he had mastered was letter identification, identification of the initial letter in a word, and rhyming. As linguistic reading systems rely on rhyming and initial consonant substitution, this was attempted. John learned 8 words belonging to several word families and was able to generate new words that followed the same patterns. Naturally, a linguistic system became the recommended reading approach. However, phonic instruction was also necessary and we wondered how difficult it would be to train John to listen to the order of individual sounds in words. Using the LAC test blocks, training was attempted by helping John to analyze and reorder the sound sequences. Near the end of the 30 minute session, John caught on and was able to perform the task with effort but correctly. This trial teaching exercise helped everyone feel more comfortable with John's potential ability to progress in phonics instruction. It also identified a concrete manner to enhance such instruction.

Testing for Generalization.

To trial teach on some items and observe generalization of skills to similar items yields most important information on what and how a child can learn. As concern always exists regarding the relevance to class goals of what a youngster has learned through trial teaching, testing for generalization to real life expectations is important. In John's case, he was asked to use blocks to divide first grade level words into each sound that he heard. He was able to do this, although with a great deal of effort. Once having divided a word in this manner, however, he was able to decode it correctly even after a 2 hour interval. This task demonstrated that although John will require a great deal of teacher guidance in analyzing and sequencing word parts, what he learns is generalizable to new learning. Active teacher guidance will be able to be reduced over time.9 Most pleasing was the zeal with which John caught on to word families and started to impress the examiner by creating his own! His eagerness to put effort into learning after so many years of failure was a great tribute to himself and to his family.

Enhancing Motivation.

The importance of varying motivational components and measuring performance gains cannot be overemphasized. We have found dramatic gains in IQ score after merely telling young children that the test was designed for children up to age 16, and then showing them the age markings on the record form. These children's failure experiences and feelings of inadequacy had resulted in very little energy being put into problem solving. Similarly, charting, contracting, and concrete reinforcers are appropriate means for investigating the discrepancy between what a child would not do, but actually could do.

Let us consider the example of Craig, a thirteen year old who had become hemiplegic as an infant due to child abuse. Craig was referred because his teachers were concerned that he wasn't working up to potential in his classroom. Craig's great verbal facility led everyone to believe that he was a child with above average intelligence, despite repeated low average performance on the WISC-R. These scores were always interpretted as being gross underestimates due to Craig's limited attention span. Craig was an extremely troubled youngster whose thoughts were preoccupied with morbid fears. For example, upon hearing a plane fly overhead, he asked whether this was the beginning of a nuclear war. When working in the quiet clinic setting, he would lash out with fury when hearing cars go by outside, "Don't people know that I'm trying to work in here? Can't they have any consideration?" Craig's attention was so difficult to maintain that items on which he had erred were readministered on his second visit to the clinic. The evaluator began by asking Craig what gift he would like to earn for good effort. A colleague was dispatched to buy what Craig wanted, a Choose Your Own Adventure Book. Craig joined the examiner in drawing a thermometer chart on which he was to accumulate 200 points in order to obtain the book. Craig self-evaluated his effort periodically. At each 50 point interval Craig earned a small item such as a Syracuse University pencil or eraser. Well, Craig tried with all his might, eyes close to the materials and fist clenched. He earned his points for good effort, but nevertheless could correct very few of his errors on the WISC-R, Woodcock Reading Mastery Tests, or Key Math. With body poised for learning, he still could not help being distracted by irrelevant noises and thoughts, He apologized profusely and tried again. Craig's performance indicated that his abilities and achievement levels have been overestimated, and that he could not "do better if he tried." His mother's and teachers' misperceptions had been causing undue additional stress. Craig was regrouped in his classes, and the teachers were given ideas on how to maximize his attention span. These included the self-charting system that had already proved successful, as well as developing a more multimedia, project oriented approach to learning that including a good deal of peer pairing.

Motivation can also be enhanced by varying the readability level of material. Often tested comprehension deficits disappear when equally difficult material of high interest is substituted. The remedial plan then necessitates encouraging teachers to use high interest materials while also enhancing internal motivation to try harder on exercises carrying lower appeal.

Testing Conclusions within the Actual Classroom Curriculum.

The results of our measures must be analyzed in relation to the student's classroom curriculum. The fact that a student can handle a seventh grade passage on a test does not mean that she can handle her seventh grade literature, science, and social studies texts. The latter may be more difficult in comprehension expectations, readability, independent research requirements, etc. Therefore, our tests should be considered merely fast estimates of where in the student's textbook series we should begin sampling skills, using an informal reading inventory approach. We frequently find that our students' reading levels are overestimated by at least a year on our measures. When applying a criterion of approximately 95 percent decoding accuracy and at least 75 percent comprehension accuracy on short textbook assignments, many students' texts are actually at a frustration rather than instructional level. Depending on the areas of weakness, modifications are necessary in order for the student to profit from the textbook assignments.

Adaptive Behavior Assessment

Observation in Analogue Settings.

Evaluation of adaptive behavior is critical to determining whether an individual is both intellectually and adaptively retarded. In developing specific programs for these students, however, it is often necessary to collect information beyond that sampled by our standardized scales. Consequently, we often invite students to spend an afternoon on campus without their parents. The student's parents provide money for lunch, and the assessment moves outdoors. Detailed observations are recorded about such behaviors as independence in dressing, crossing the street, ordering in a restaurant, paying the bill, social discourse, grocery shopping, items of interest in stores, etc.

Observation in Natural Settings.

At times, information gleaned from informants regarding adaptive behavior is thought to be as over or underestimate

BEST COPY AVAILABLE

of their offspring's true independent communication, self help, and socialization skills. Consequently, some of these items have been sampled in situ by, for example, asking permission from the parents to spend several hours in the home joining the student in such activities as running the wash machine, cooking, dialing emergency phone numbers. The contrast between reported and observed findings yields important insights into environmental factors that may not be supportive of such personal independence.

Developing and Norming Adaptive Behavior Scales.

Sabrina was a very beautiful, tall, well-groomed twelve year old youngster who attended an inner city school. She, and over 70% of her classmates, were black. Sabrina's mother referred her for evaluation because she was deeply concerned that Sabrina was about to be labelled educable mentally handicapped by her school. She was in the sixth grade but performing academically on a second grade level. Due to a severe handicap in comprehending more complex semantics and a mother who was eager to do everything for her, Sabrina's functioning on social maturity scales also fell within retarded ranges. The contradiction that most disturbed us was that Sabrina was one of the more popular youngsters in her class and was a solid participant in her peer group. In order to explore this further, several twelve and thirteen year old girls were interviewed in order to determine what they saw as important social attributes in order to be considered a "with it" peer. A 31 item checklist was then administered to Sabrina and her female classmates. The checklist sampled such categories as relationships with girls, relationships with boys, dressing preferences, cooperative behavior, leisure time activities, assertiveness in social planning, dancing ability, school intramural and club participation, baby sitting jobs, cooking, etc. Students rated each item as true most of the time, sometimes or hardly ever/never. For the benefit of those with reading difficulties, the teacher read the items to the pupils for the benefit of those with reading difficulties. Interestingly, Sabrina ranked herself within the top third of the class on these items. Her teachers completed the same for on each female student and closely concurred with the students' self ratings. This information proved quite powerful in influencing the school administration to overlook the results of the standardized measures, which would have resulted in a segregated school placement. Instead, Sabrina was placed in a resource room for half of each day and integrated for the remaining time with those with whom she had most in common, her friends.

Another example of the need to at times develop our own adaptive behavior scale occurred with Tim, an only child whose parents complained that he took little independent initiative for work. It was true that Tim was a very capable

BEST COPY AVAILABLE

young men who didn't apply himself academically. One reason for his seldom getting homework done became apparent upon the home visit. Not only did Tim not have a dresser into which to place his clothing, but he also had no desk or even table designated as workspace. Clothing and papers alike were neatly stacked on his bedroom floor. Tim's parents had overinvested in their home, which remained very sparsely furnished. When questionned about when he does his homework, Tim complained that his parents were always at work or at meetings, which left him with so many chores that he had little time left for homework. Therefore, very little was ever completed. Tim's parents concurred that they were unable to offer him much supervision. At the same time they complained bitterly about their need to always nag Tim to take responsibility around the house and help them out. When they were asked to enumerate Tim's responsibilities, they listed over 20 activities for which he was responsible weekly. This included such common items as feeding the pets, emptying the garbage, cleaning his room, making his bed. There were surprising items as well: making breakfast for his parents and himself, setting the table at all meals, washing dishes at all meals, grocery shopping, putting away things other than his own that lay around the house, vacuuming and dusting rooms other than his own. Tim's parents were both only children and had no nieces, nephews, or even children of close friends with whom they could compare Tim's need for constant reminders to do his chores. They were disbelieving when we commented that their expectations seemed unreasonable for a fifth grader. Consequently, we developed a checklist of 27 responsibilities, including jobs that other children might be expected to do, even though these were not expected of Tim: e.g. babysitting, practicing a musical instrument. Tim's classmates were asked to check off how many times a week they did each job (0, 1 or 2, 3 or 4, 5 or more) and how many times they required reminders. Girls of course scored far higher than boys. However, among the boys, Tim ranked highest of his twelve classmates, doing 56.5 jobs per week. As for reminders, he ranked 5th in the class, requiring 14 prompts per week. The average male number of jobs per week was 42.5, while the average number of reminders was 17.8. When Tim's parents were shown the data indicating that Tim was very average in terms of requiring reminders, but that perhaps too much was being expected, his father commented "I see the problem and it begins with us." Enrolling in parent classes aided them in learning to take pleasure from their son and becoming gentle supporters of his academic progress.

An interesting example of the value of exploring the student's functioning in other ecological systems is the case of Marcia. Marcia was in eighth grade and about to be labelled learning disabled. This disturbed her parents a great deal because at their Jehova Witness meetings Marcia would get up and read with reported ease and good comprehension. They could not understand why the school

BEST COPY AVAILABLE

personnel claimed that Marcia was reading at only a third grade level. One of the team members asked to be invited along to the Jehova Witness meeting. She observed that the leader of the group took Marcia aside ahead of time and practiced a short paragraph with her. He also explained exactly what it meant and practiced the questions that he would be asking her. When it came her time, Marcia indeed read very well and responded appropriately to the questions. We brought the Watchtower publication back to the clinic with us and, on Marcia's next visit, conducted an informal reading inventory with it. Marcia was able to read with only 40% accuracy and comprehended less than half of the information. Upon seeing this, her parents recognized where the discrepancy in perceptions was coming from and permitted the school to offer her special services.

Nonstandard Use of Criterion - Referenced Instruments

As with standardized instruments, our criterion - referenced measures merely tell us that a child did not do something, and not that the child could not. Lest we draw inaccurate conclusions, we can not accept errors at face value. We must begin where our measures left off and explore further, with the same and similar materials, until we've demonstrated just what the child knows and how she comes to know.

Evaluating Previous Opportunities for Learning.

Evaluation of the instructional objectives to which a student previously has been exposed is essential to understanding his or her present capabilities. When considered together with the effort involved in attempting to teach the student skills that he or she hasn't mastered, evaluating past learning opportunities offers a valuable perspective on the reason for and degree of modifiability of the child's weaknesses.

Let us consider Josh. Josh was a 12 year old, very bright young man attending a private school with other bright youngster. His reading, math, and comprehension skills were excellent. However, due to terrible spelling, Josh's teachers had asked his parents to have him evaluated for a learning disability. Trial teaching indicated no difficulty learning to spell either phonetic or nonphonetic words, as well as ease with generalizing these spelling forms to new words. When these findings were explored with his teachers, they commented, "but we never teach spelling as a subject; these children just pick it up." Unfortunately, this was not the case for Josh whose need for directed teaching in spelling helped to explain his poor spelling achievement. A formal spelling curriculum was instituted and Josh, although

still not a great speller, is in college and earning a B average. What had initially appeared to be a severe disability was in large part due to lack of opportunity to learn.

Sally's story is similar to Josh's. Upon transferring from a university sponsored "free school" to public school in second grade, she was referred to the clinic as a nonreader. She impulsively guessed at words from their first letter and demonstrated no phonic readiness. A phone call to her previous school indicated that they had engaged in no phonic readiness instruction. Children chose their own reading materials and cracked the code independently, through trial and error. Well, Sally obviously had not cracked the code, but trial teaching indicated that she could master the necessary segmentation skills. Once mastered, Sally's ability to independently apply the skills were good. Sally repeated second grade in the public school and by the end of that year had caught up to her peers. Spelling now seemed to be giving her some difficulty, but, forwarned about her directed teaching needs, Sally's parents provided extra tutoring and left nothing more to chance.

Trial Teaching.

Knowing that Wendy, age 21, can't button is important, What is more important, however, is attempting to teach her to button and finding that a backward chaining process works. Backward chaining then becomes a useful strategy to attempt on other self help objectives.

Task Analysis.

Seven year old Allison was delayed in expressive language skills, and was unable to name letters of the alphabet other than those that appeared in her name. Allison's teacher was confused because she found that Allison could repeat letter sounds and match and copy letters accurately, but couldn't seem to remember them. By task-analyzing "letter naming" the examiner found that Allison did remember a great deal about letter names. When the letters were named for her, and she was asked to point to them, Allison demonstrated 100 percent accuracy. Her difficulty seemed related to retrieval of isolated sounds from memory. Experimentation with methods that paired Allison's weaker naming skills with her stronger motor expression and visual/auditory reception skills was profitable. For example, Allison drew, traced, pasted, constructed and copied letters as she imitated the examiner's dictation of letter names. Since Allison could distinguish the sounds of initial consonants in each word well, the examiner tried relating the letter form to a word that began with the same letter and also had its shape. For example

"snake" begins with an "ss" sound, a snake can be shaped into an "s", and the letter "s" can be superimposed on it. This method was recommended and worked well. Over time, Allison's efficiency with letter retrieval increased and phonic instruction was introduced. In the meantime, she had progressed well with a sight approach to reading.

A task analysis of David's reversal problems helped David understand and better accept the nature of his difficulty. At age seventeen, David would still read and write b's, d's, and p's interchangeably. He corrected his errors in reading because the words did not fit in context. In writing, however, he was unable to proof for errors. A rather simple experiment was set up in order to determine the origin of David's difficulty. Lower case b's, d's, and p's were written one per index card. These cards were then flipped at the rate of one per second. First David was required to point in the direction to which each stem faced. Next he was asked to write from memory what he had seen as rapidly as possible. He then had to write the same letters from dictation. Finally, he was asked to name the letters. David's only errors were on the latter two tasks. Apparently, when looking at these letters he associates them with the wrong auditory counterpart. This also occurs in writing, when his self-verbalization of word sounds congers up the wrong visual image. Unfortunately, we could think of nothing to overcome this problem other than encouraging David to feel comfortable enough with his good intelligence and learning ability to ask for proof readers when necessary and learn to use a word processor that corrects for spelling. David was pleased to finally have an answer to what he thought was his stupidity and in fact decided that instead of an army career he may pursue college!

Consulting the Child

It is impossible to know for sure what is going on in a child's mind. We might observe a child's task execution in fine detail, and analyze his successes and errors. However, our conclusions are still only hypotheses. Why not make the child a partner in the evaluation process and ask the student how he or she goes about solving the task?

Jennifer, for example, was referred by her third grade teacher because of poor classroom progress despite adequate intelligence and a family background that encouraged educational attainments. Evaluation results indicated a one year lag in all school subjects, though no striking language, visual perceptual, or motor delays. However, marked immaturity in application of learning strategies that would aid organization and recall of information was evident. In order to investigate Jennifer's learning strategies further,

BEST COPY AVAILABLE

the examiner instructed Jennifer to study ten new spelling words at another table. Within two minutes Jennifer returned, proud to announce completion of the assignment. Upon testing, however, Jennifer could spell only three of the ten words. The examiner then asked Jennifer to describe what she was doing while studying. Jennifer replied that she had recited each word's letters once while looking at the words. Then she repeated this activity again. To her, twice through meant "learned." Jennifer's reflections were very important because they indicated that she does indeed employ learning strategies, but does not get actively, cognitively involved with the information. Additional exercises geared toward active self-evaluation and involvement, using visual imagery, more intense verbal mediation, association cues, questioning techniques, and Meichenbaum's self-instructional methods proved very useful. Jennifer's teacher brainstormed with the team about how these methods could be applied in her other subject areas as well.

An interesting example of the importance of asking the student occurred when testing Steven, a high school junior. Steven was labelled learning disabled and his teachers were seeking advise on spelling instruction. His spelling was equivalent to that of a second grader, although all mispellings were always good phonetic approximations. Even words that he had encountered thousands of times before were mispelled. For example, "go" was spelled "gow", "was" was spelled "wuz", and at other times each was spelled correctly. As Steven's phonetic approximations to the correct spelling were excellent, it was hypothesized that a visual memory difficulty impaired his spelling progress. The Test of Visual Perception Skills had just arrived at the clinic and, eager to try it out, it was administered to Steven. Well, Steven performed like an eight year old on all subtests, with the exception of visual memory, where he had a perfect score and exceeded the performance of the average 12th grader. We were dumb-founded and had no recourse but to ask Steven what was going on. Well, his answer was incredible. He told us that he merely looked at the last two symbols of the stimulus card, and then picked the right sequence of symbols on the response card by again perusing only the last two symbols. Well, we tried the method ourselves and it worked! Steven's method gave us a valuable clue as to the limits of his visual memory span. When we then asked him to write flashed words, we found that he could only write two letter words from memory. Three letter words were often incorrectly recalled. With this information, a program was designed that utilized only three letter sequences at the most. Spelling was taught utilizing oral recitation, visual discrimination sheets on which Steven had to fill in missing letters by matching to sample, and a tracing and fading method. Steven's progress was slow and he eventually chose to utilize a mispeller's dictionary and buy a word processing computer program that included a spelling checker.

BEST COPY AVAILABLE

A cute example of the value of conferring with the child occurred with five year old Rachael, who often wrote her name from right to left on her paper. Upon the teacher's insistance to write from left to right, Rachael eventually conceded, but began her name on the left with L and ended on the right with the R. About to embark on a visual-motor training program, the teacher decided to ask Rachael why she continued to write her name correctly at times, while at other times reversing the letters. Rachael's response was "isn't this the way I'm supposed to write my name in Hebrew?" Clearly, her Sunday school lessons had confused her, and the situation was easily rectified.

Consulting the Parents

At the Psychoeducational Teaching Laboratory we require parents to observe our procedures whenever possible through our one-way mirror. If their children object, then we certainly forego the observation. However, the information gained from the parents' insights is invaluable to the evaluation process. The parents actually become team members and partners in the attempt to discern the nature of the learning difficulty.

Examples of the valuable input of parents include Chrissie's mother who was able to translate for us her daughter's taped responses. Chrissie is a ten year old severe aphasic whose articulation is unintelligible. Had it not been for Chrissie's American Indian signing ability, her mother's translation, and Chrissie's wonderfully patient temperament, it would have been impossible to assess her in any area that required expression of knowledge.

On another occasion, while using projective techniques we were very concerned about Vicky's always shifting discussion away from herself, making constant reference to her mother. Even on her Draw a Person, she drew her mother and spent a great deal of time on her magnificently detailed sweater. Vicky's mother, watching through the mirror, commented that Vicky was elated because the two of them had just gone on a special weekend vacation all alone. In addition, Vicky's mother knits a great deal and had just completed a sweater for Vicky. Vicky was in fact wearing the sweater that day. When similar tools were used one week later, Vicky no longer deferred to her mother. Our misperceptions were clarified.

The tears shed by Max's father when observing his son's reading struggle and self-deprecating comments alerted the team to the fact that Max's father had experienced very similar learning difficulties. This is something that had been carefully hidden from everyone's knowledge, as in his occupation of painter he had little need for reading. When

he was encouraged to share this information with Max, the relief in Max's demeanor was instantaneous. He adored his father, admired his achievements, and recognized that with effort he too could be all right.

The outcome was not as pleasing in Liza's case. Liza was a fourteen year old who was making no attempt to learn in school at all. She appeared extremely depressed and no amount of informal get togethers with the team members for shopping mall walking or luncheons would help her reveal some of her concerns. Liza's mother observed the testing sessions and indicated that the problems had to be purely a learning phenomenon as home life was wonderful. During one session, Liza's father came to observe alone. When simply asked about his daughter's early language development, he embarked on a two hour tirade about how impossible it was for anybody to learn to speak normally in his family. In the course of the discussion his many marital indiscretions were revealed, the fact that everyone knows, and the impression that the household is one of constant chaos, screaming, and ignoring of one another. This information encouraged us to separate Liza's mother from the window during the next session, take her out for coffee, and explore her own feelings about family life. Much of what her husband had said was confirmed and both parents agreed that they were hoping that a learning disability would absolve them from responsibility for their daughter's difficulties. A counselling recommendation was accepted, though still not acted upon six months later.

Much insight can also be gained from observing parents in interaction with their children in their homes and clinic. Standard clinic procedure is to get to know the youngster in less formal circumstances at home and also at a school visit. Upon coming to the clinic, one parent might be asked to engage in a cooperative activity with their youngster, such as drawing a triangle with an Etch - A - Sketch. Another parent may be asked to review some worksheets with their child. The nature of the interaction and teaching methods utilized is quite revealing.

Consulting the Teachers.

Clearly, teachers and parents know more about the youngsters that we are being asked to evaluate than we will ever know. School observations and visits are essential in order to make the teachers' insights part of the information gathering process. Although teachers are encouraged to observe and join in the evaluation deliberations, this seldom occurs. Consequently, we have made it a practice to send a preliminary report prior to conferencing with school personnel. In this manner they are familiar with our thoughts before sitting down to talk and have had adequate time to formulate their own ideas for implementation. These recommendations are far more valuable than ours because they

BEST COPY AVAILABLE

come from knowledge of what teachers are most comfortable doing in their own settings. We generally follow up these meetings with a letter specifying the conclusions arrived at and the recommendations that each teacher has indicated willingness to implement. At these meetings it is recognized that the school is a transdisciplinary setting and that often a teacher not directly responsible for a certain area will feel most comfortable taking responsibility for implementation. For example, it was a social studies teacher and not the psychologist or guidance counselor who volunteered to set up a social skill training program for a student whose social imperceptiveness was a primary deterrant to life adjustment.

Asking teachers to complete rating scales also becomes a valuable source of information. Let us illustrate with Craig, whom we discussed earlier. Craig was no disturbance to his classmates, yet was so preoccupied with his own fantasies that he could not attend to classwork for any significant period of time. In order to determine how best to maximize attention, his five teachers were each asked to complete a rating sheet for five consective school days. At the end of each 40 minute class period, they estimated the length of time that Craig had attended or not attended to aural instruction and to independent seatwork. Results indicated that he generally was on task for no more than five out of the forty minutes in regular classes, while he was on task anywhere from 15 to 40 minutes in his resource room. Craig was then invited to a conference with his teachers, where their concern that opportunities for learning were being missed was expressed to him. Craig complained that physically changing classes was difficult for him. Recognizing the limits of his hemiplegia, Craig often spent classtime worrying about how he would manage to get to his next class within four minutes given the distances, stairs, and his difficulty carrying his books. In order to avoid having to return to his locker between classes and fiddle with the lock that he had difficulty holding and turning at the same time, Craig had begun to carry all his books with him at once. This led to further delays as the books continually dropped on his way to classes. Craig also was upset that resource room replaced art, gym, music, home economics, and shop. School was all work and no fun. It was jointly decided that Craig would no longer attend social studies class, which required him to climb 47 steps. His social studies instruction would become the resource teacher's responsibility, and he would then be able to attend all the specials with his peers. In addition, Craig agreed that he would chart his efforts daily in his remaining four classes. If he was on task for at least five minutes (a guaranteed built in success interval as indicated by the teacher ratings) in each class, and this was confirmed by a checkmark placed on his chart by each teacher, then Craig coudl use five minutes of his resource time to work on the computer. The system worked well and at the end of the first

BEST COPY AVAILABLE

week Craig's checklist began requiring 7 minutes on task for 7 minutes on the computer. Craig's personal goal was to replace resource entirely with the computer. Given the educational program which the resource teacher had developed for the computer, this was totally acceptable. In the meantime, Craig's mother bought him a bookbag and when he had no homework he was permitted to leave his books in the classroom.

Using Classroom Materials for Trial Teaching

Using classroom materials for trial teaching is one of the most meaningful forms of assessment. The need to generalize from tasks that may share little in common with classroom expectations is minimized, and face validity of recommendations is enhanced.

Dougie's parents asked that the clinic evaluate his reading abilities as the school wanted to transfer him to a special class for the learning disabled. His parents felt that Dougie was doing well in first grade, in that he was able to read his first preprimer book. They quickly realized, however, that Dougie was merely memorizing the context, in that he recognized few of these words when we presented them in isolation. In order to determine the best approach to reading instruction, we tested several trial teaching methods. Three lists, each consisting of four words that were unknown to Dougie, were taught using three different reading methods: drawing attention to visual aspects, phonic aspects, and combining both of these with tracing. Each list of words was taught in a 10 minute session, then tested for immediate recall. Word lists were approximately equal in difficulty, being matched for speech parts, number of letters, number of syllables, and spelling regularity as in a linguistic system. Dougie was retested for delayed recall after an hour and fifteen minutes. Using the visual method, he scored a 2/4 on immediate recall and 0/4 on delayed recall. Dougie tended to guess without thought or consideration to the visual cues that had been highlighted during teaching. When taught auditorally, he scored 4/4 on immediate recall and 3/4 on delayed recall. With the last method, a visual - auditory - kinesthetic - tactile approach (VAKT), Dougie scored a 2/4 immediately after teaching and 1/4 on delayed recall. Dougie tended to get silly during the VAKT lesson, seemingly becoming overstimulated. Learning word recognition through the auditory mode, by means of phonetic blending, appeared to be most compatible with Dougie's detailed, analytic learning style. Focusing on sound symbol relationships among each phoneme within a word even seemed more beneficial than teaching linguistic word families in that Dougie did not recognize the common "and" stem of a word appearing on each list. In addition, he had not learned to recognize words and stems by sight in his preprimer, and could not perform the

BEST COPY AVAILABLE

auditory omissions and substitutions essential to the linguistic process. A phonetic reading method was recommended and, at his parents' insistance, Dougie was not labelled. He was promoted to second grade and received an hour of individualized instruction from the reading teacher daily. Progress has been slow. The labelling battle continues, as the school insists on special education services and the family insists that Dougie should remain where he is, given his congeniality and good friends. Besides, Dougie's father is a truck driver, Dougie's only wish in life is to be a truck driver, his parents adore him whether he reads well or not, and they're willing to be patient until he finally reads. All they want is for all of them to be happy and for the school to stop trying to turn a lovely child into a handicapped individual.

Juli was getting D's and F's on all her ninth grade compositions. The team sat with her while she taped her essay, and then transcribed it. She handed in her work and received a B. On her next composition, we helped Juli plan ahead by writing an outline, then taping, then transcribing, and then correcting her rough copy. She got an A! Juli has continued to use this method successfully to work around the confusion that arises when she has to express her ideas in writing. Unfortunately, this has not aided her performance on short answer tests in those classes where her teachers feel that it would be showing favoritism to allow Juli to tape. This is a compromise that Juli is willing to deal with, however, as she does not want to be labelled.

Marc, a fifteen year old ninth grader, had an easier time under similar circumstances. He was labelled learning disabled due to his third grade spelling level. His attitude toward school was poor and he hadn't tried a great deal for the last five years. His teachers felt that his spelling disability was due to his not having taken advantage of opportunities to learn. In order to check out the severity of his spelling problem, we took a passage that he had written, typed it up, and asked him to circle all words that he thought were misspelled. He could locate very few. A proofing checklist for capitals, periods, and spelling was not very helpful. However, he was able to self-correct errors on a third grade passage that he had written from dictations. Clearly, Marc's problem was real and the teachers began to hand papers back to him with their own corrections added, rather than asking him to do the corrections himself and hand them in once again.

BEST COPY AVAILABLE

The examples of methods attempted at the clinic to match classroom assignments to learner strategy are far too numerous to elaborate on here. To summarize, however, several techniques are listed.

We have attempted to alter tasks to match students' attending strategies by building association value into the information, pairing the information with such salient attributes as color, shape, and size, putting less information on a page, overlearning only a few items rather than a complete list, eliminating pictoral clues and distractions in books and worksheets, clustering items for learning by category, and eliminating similar information until the criterion is well learned.

It is common to evaluate a child's information - processing speed and to slow information presentation in order to allow more time for labelling, verbal rehearsal, and chunking. Stretching out phonic sounding out of words has also proved of value to the slow auditory processor. At times speeding up presentation rate is helpful in catching the impulsive youngster's attention before he is once again distracted. Similarly, rapid changes in tasks have been helpful in regrabbing attention.

An important attribute that requires evaluation is the amount of practice that each youngster requires. Recognizing that some children deteriorate with continued memory searches and effort is also critical to providing guidelines for instruction.

Matching tasks to what we learn about children's cognitive styles is critical: e.g. gestalt aspects may be emphasized with the more impulsive child and analytic aspects of tasks with the reflective child, directed instruction with the low conceptual level learner and discovery methods with the high conceptual level learner, self-corrections with the internally controlled and teacher corrections with the externally controlled, learning strategies are taught to the youngster who is unplanful and disorganized in his approach to memory tasks, etc. Similarly, incentives for achievement have been matched to the child's reinforcement preferences. Finally, experimentation with setting modifications that create better attention, generalization of learning, modelling of reflectivity, and peer learning, have led to valuable guidelines for future planning.

As is evident by now, a multidimensional approach to assessment is more an art than a science. The evaluation can easily become an ongoing process as we find that the same method does not work on all tasks, and the same materials or

BEST COPY AV...

methods may, after some time, no longer work for the child. Even settings that appear to facilitate a student's learning may become less effective over time.

Our process approach has recognized that whether any of the child's unique ability patterns, learning styles, and behavioral attributes become assets or severe liabilities depends on the nature of the school tasks they are expected to accomplish, and the settings in which they study, live, and play. Through our alternative assessment process, what the child knows, what the child is ready to learn, and how the child learns best can be specified and translated into educational recommendations specific to the child's required curriculum and also the child's school and home setting. Put another way, the Psychoeducational Teaching Laboratory's informal evaluation strategies permit one to examine the matches and mismatches between task, setting, and learner which contribute to learning success and failure. Only then can the teaching curriculum and environment be formed into relationships of best fit with our students' learning readiness and unique ways of knowing.

BEST COPY AVAILABLE

Paper presented at the Annual Convention

of the

Council for Exceptional Children

(63rd, Anaheim, CA, April 15-19, 1985)

BEST COPY AVAILABLE